

### EXERCISE 19A.1

- 1   **a**  $10 \text{ u}^2$    **b**  $20 \text{ u}^2$    **c**  $40 \text{ u}^2$    **d**  $28 \text{ u}^2$    **e**  $20 \text{ u}^2$   
     **f**  $28 \text{ u}^2$
- 2   **a** all have area  $16 \text{ u}^2$
- b**   **i**  $16 \text{ u}$    **ii**  $20 \text{ u}$    **iii**  $18 \text{ u}$    **iv**  $26 \text{ u}$    **v**  $34 \text{ u}$   
     **vi**  $24 \text{ u}$    **vii**  $26 \text{ u}$    **viii**  $22 \text{ u}$
- c** Shapes with the same area do not necessarily have the same perimeter.

### EXERCISE 19A.2

- 1   **a**  $\text{m}^2$    **b**  $\text{cm}^2$    **c** ha   **d**  $\text{cm}^2$    **e**  $\text{mm}^2$   
     **f**  $\text{km}^2$    **g**  $\text{mm}^2$    **h**  $\text{cm}^2$    **i**  $\text{cm}^2$    **j**  $\text{cm}^2$
- 2   **a**   **i** 132   **ii** 302   **b**  $17.36 \text{ m}^2$    **c** €953.06
- 3   **a**   **i** 540   **ii** 280   **b**  $16.4 \text{ m}^2$    **c** \$506.76
- 4   **a** 6   **b** 5   **c**  $\frac{1}{4}$    **d**  $8\frac{3}{4}$    **e**  $8\frac{3}{4}$

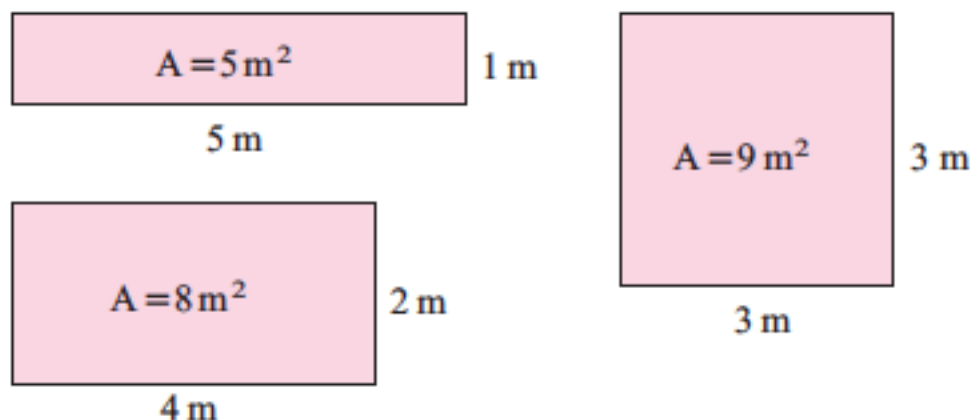
### EXERCISE 19B

- 1   **a** multiply by 100   **b** multiply by 10 000  
     **c** multiply by 10 000   **d** multiply by 100  
     **e** multiply by 1 000 000   **f** multiply by 1 000 000  
     **g** divide by 100   **h** divide by 10 000  
     **i** divide by 10 000   **j** divide by 100  
     **k** divide by 1 000 000   **l** divide by 1 000 000
- 2   **a**  $4.52 \text{ cm}^2$    **b**  $75\,000 \text{ cm}^2$    **c**  $58\,000 \text{ m}^2$   
     **d**  $0.3579 \text{ m}^2$    **e** 630 ha   **f**  $36\,500\,000 \text{ mm}^2$   
     **g**  $0.55 \text{ m}^2$    **h**  $520 \text{ mm}^2$    **i** 0.68 ha  
     **j**  $44 \text{ cm}^2$    **k**  $6000 \text{ m}^2$    **l**  $2 \text{ km}^2$   
     **m**  $70 \text{ mm}^2$    **n**  $4.8 \text{ km}^2$    **o**  $2500 \text{ mm}^2$   
     **p**  $8000 \text{ cm}^2$    **q**  $88 \text{ cm}^2$    **r**  $0.66 \text{ m}^2$   
     **s** 50 ha   **t**  $5.5 \text{ km}^2$    **u**  $0.001 \text{ m}^2$

## EXERCISE 19C

- 1   **a**  $720 \text{ cm}^2$       **b**  $504 \text{ mm}^2$       **c**  $48 \text{ km}^2$   
     **d**  $225 \text{ m}^2$       **e**  $70.56 \text{ cm}^2$       **f**  $4 \text{ ha}$
- 2   **a**  $200 \text{ cm}^2$       **b**  $64 \text{ cm}^2$       **c**  $28 \text{ m}^2$   
     **d**  $92 \text{ m}^2$       **e**  $150 \text{ m}^2$       **f**  $400 \text{ cm}^2$
- 3  $65 \text{ m}^2$     4   **a**  $27 \text{ ha}$     **b**  $\$4860$
- 5   **a**  $625 \text{ cm}^2$     **b**  $17.5 \text{ m}^2$     **c**  $280$       **d**  $\pounds 980$
- 6   **a** 3 units by 2 units, perimeter 10 units  
     6 units by 1 unit, perimeter 14 units  
     **b** 4 units by 2 units, perimeter 12 units  
     8 units by 1 unit, perimeter 18 units  
     **c** 4 units by 3 units, perimeter 14 units  
     6 units by 2 units, perimeter 16 units  
     12 units by 1 unit, perimeter 26 units  
     **d** 4 units by 4 units, perimeter 16 units  
     8 units by 2 units, perimeter 20 units  
     16 units by 1 unit, perimeter 34 units

7   **a**



- b**  $9 \text{ m}^2, 16 \text{ m}^2, 21 \text{ m}^2, 24 \text{ m}^2, 25 \text{ m}^2$   
**c**  $17 \text{ km}^2, 32 \text{ km}^2, 45 \text{ km}^2, 56 \text{ km}^2, 65 \text{ km}^2, 72 \text{ km}^2,$   
      $77 \text{ km}^2, 80 \text{ km}^2, 81 \text{ km}^2$

## EXERCISE 19D

- 1   **a**  $42 \text{ m}^2$       **b**  $20 \text{ cm}^2$       **c**  $38.5 \text{ cm}^2$       **d**  $37.1 \text{ m}^2$   
     **e**  $6 \text{ m}^2$       **f**  $12.48 \text{ m}^2$
- 2   **a**  $78 \text{ cm}^2$       **b**  $89 \text{ m}^2$       **c**  $11 \text{ m}^2$
- 3   **a** 48 ha   **b** €17 280   4   **a**  $24 \text{ m}^2$    **b** £333.60
- 5   **a**  $2625 \text{ cm}^2$    **b**  $240 \text{ cm}^2$

## EXERCISE 19E.1

- 1   **a**  $0.008 \text{ cm}^3$    **b**  $60\,000 \text{ cm}^3$    **c**  $11\,800 \text{ mm}^3$   
     **d**  $640 \text{ mm}^3$    **e**  $3\,000\,000\,000 \text{ mm}^3$    **f**  $7\,500\,000 \text{ mm}^3$
- 2   **a**  $0.5 \text{ cm}^3$       **b**  $7 \text{ cm}^3$       **c**  $5 \text{ m}^3$       **d**  $0.45 \text{ m}^3$   
     **e**  $0.002 \text{ m}^3$       **f**  $5.4 \text{ m}^3$

## EXERCISE 19E.2

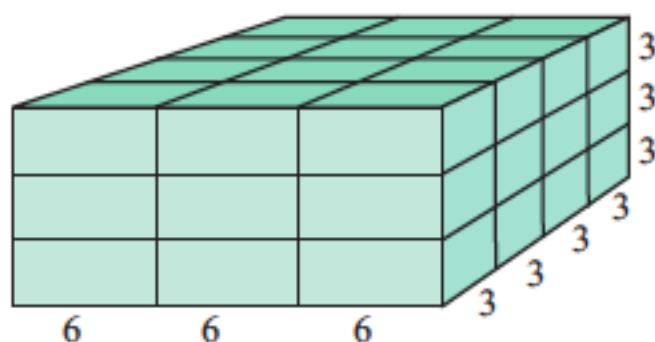
- 1   **a**  $63 \text{ u}^3$       **b**  $64 \text{ u}^3$       **c**  $96 \text{ u}^3$       **d**  $51 \text{ u}^3$   
     **e**  $40 \text{ u}^3$       **f**  $61 \text{ u}^3$
- 2   **B, C, A, D**      3   **a**  $60 \text{ cm}^3$    **b**  $420 \text{ m}^3$    **c**  $110 \text{ cm}^3$
- 4   **a**  $50 \text{ m}^3$       **b**  $48.44 \text{ cm}^3$    **c**  $315.4 \text{ m}^3$    **d**  $1332 \text{ cm}^3$   
     **e**  $73.44 \text{ m}^3$       **f**  $108.63 \text{ m}^3$
- 5   **a**  $36 \text{ cm}^3$       **b**  $140 \text{ m}^3$       **c**  $80.64 \text{ cm}^3$
- 6    $4 \text{ cm} \times 3 \text{ cm} \times 3 \text{ cm},$     $4 \text{ cm} \times 9 \text{ cm} \times 1 \text{ cm},$   
      $6 \text{ cm} \times 6 \text{ cm} \times 1 \text{ cm},$     $6 \text{ cm} \times 3 \text{ cm} \times 2 \text{ cm},$   
      $9 \text{ cm} \times 2 \text{ cm} \times 2 \text{ cm},$     $12 \text{ cm} \times 3 \text{ cm} \times 1 \text{ cm},$   
      $18 \text{ cm} \times 2 \text{ cm} \times 1 \text{ cm},$     $36 \text{ cm} \times 1 \text{ cm} \times 1 \text{ cm}$
- 7   **a**  $162 \text{ cm}^3$       **b**  $198 \text{ cm}^2$

## EXERCISE 19F

- 1   **a** mL   **b** L   **c** kL   **d** L   **e** mL   **f** kL  
     **g** mL   **h** ML   **i** ML   **j** ML   **k** kL   **l** mL
- 2   **a** 5600 L   **b** 3.54 L   **c** 0.76 ML  
     **d** 7.2 L   **e** 6.3 m<sup>3</sup>   **f** 12 400 000 mL  
     **g** 62.5 mL   **h** 400 mL   **i** 3500 kL
- 3   **a** 2.4 L   **b** 5 L   **c** 120 kL
- 4   **a** 210 mL   **b** 600 mL   **c** 216 mL
- 5 72 L   **6** 66 times   **7** 510   **8** 210 kL

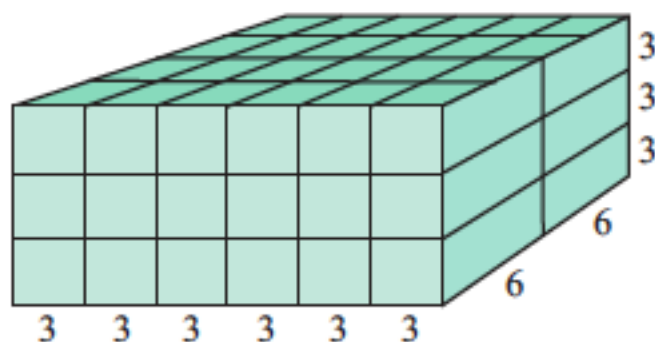
## EXERCISE 19G

- 1   **a** 66 m<sup>2</sup>   **b** €4422   **2**   **a** 4400 m<sup>2</sup>   **b** 88  
**3** 7.875 m<sup>2</sup>
- 4   **a** 100 m   **b** 10 m   **c** 40 m   **d** 5 m   **e** 12.5 m  
     **f** 8 m   **g** 20 m   **h** 800 m
- 5 18 m<sup>2</sup>   **6** 1350 cm<sup>3</sup>   **7** 30 000   **8** 180 000 m<sup>3</sup>
- 9   **a** 630 L   **b** 78.75 buckets
- 10



i.e., 36 can  
be packed

or



**REVIEW SET 19A**

- 1   **a** 35 600 m<sup>2</sup>                      **b** 0.357 m<sup>2</sup>                      **c** 7200 mm<sup>3</sup>  
2   **a** 24.8 m<sup>2</sup>                      **b** 57 m<sup>2</sup>  
3   **a** 120 u<sup>3</sup>                      **b** 54 m<sup>3</sup>                      **c** 199.52 cm<sup>3</sup>  
4   **a** 0.38 L                      **b** 5.4 m<sup>3</sup>                      **c** 7.528 L  
5   **a** 47 m<sup>2</sup>   **b** 3.13 L   **6**   **a** 9 posters   **b** 0.54 m<sup>2</sup>  
7   **a** 100 stamps   **b** £22.50   **8** 67.5 kL

**REVIEW SET 19B**

- 1   **a** 0.34 ha                      **b** 320 mm<sup>2</sup>                      **c** 7 200 000 mm<sup>2</sup>  
2   **a** 92 m<sup>2</sup>                      **b** 329 m<sup>2</sup>  
3   **a** 45 kL                      **b** 8.9 cm<sup>3</sup>                      **c** 4600 L  
4   **a** 36 u<sup>3</sup>   **b** 0.36 m<sup>3</sup>   **c** 100 m<sup>3</sup>   **5** 1000 containers  
6 4 prisms   **7** 1731 kL   **8** £99.75   **9** 37 m<sup>2</sup>